

## **REMARKS**

This paper is filed in response to the Final Office Action mailed September 01, 2010, as well as the Advisory Action mailed on November 04, 2010. Claims 10-18 and 20 have been withdrawn. Claims 1, 7 and 21 have been amended. Claim 2 is original. Claims 3-6 and 19 are previously presented. Claims 8 and 9 have been cancelled. Claim 22 is new. Therefore, claims 1-7, 19 and 21-22 as amended remain pending, and Applicant respectfully requests reconsideration and allowance thereof.

### **Claim amendments**

Claim 1 has been amended to clarify that the water borne coating composition is a film forming coating composition. Further claim one has been clarified that the film forming stain blocking water borne coating composition is for coating a substrate, wherein the coating composition prevents substances contained in the substrate from leaching into the coating composition. Support for this amendment can be found in the application as filed on page 1, lines 15-17, page 2 lines 14 through 15, page 3, line 28 – page 4, line 16, and page 19, lines 6-16.

New claim 22 has been added. Support for this claim can be found in the application as filed on page 4, lines 4 through 16, and page 14, lines 13 to 21 page 18 lines 11 to 12.

Claims 7 and 21 have been amended. Claim 7 has been amended to indicate that the weight percent is of the total coating composition. Claim 21 has been amended to correct an antecedent basis issue. The amendment for claim 7 can be found on page 13, lines 13-19 of application as filed. Therefore, no new matter has been added.

### **§112 Rejection**

Claims 7 and 21 stand rejected under 35 USC §112, second paragraph, for being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to claim 7, the Office Action states that it is unclear what the weight percentage for the dispersing agent is based on (total weight of the coating composition, solids in the composition, etc.). Applicant has amended the application in accordance with page 13, lines 13-19 of the application as filed as indicated by the Examiner, thereby obviating the instant rejection.

Regarding claim 21, the Office Action indicates that there is insufficient antecedent basis for “the layered double hydroxides”. Applicant has amended claim 21 to make it dependent from claim 2 instead of claim 1. Claim 2 positively claims layered double hydroxides.

### **§102(b) Rejection**

Claims 1-8, 19 and 21 are rejected under 35 U.S.C. §102(b) as being anticipated by Rohrbaugh et al (US2002/0028288) in view of evidence provided by Bejoy (Hydrotalcite article).

In order to anticipate a claim, a reference must disclose each and every element of the claim. MPEP §2131. Further, reference must show all element “in as complete detail as is contained in the ... claim.” *Id., citing Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Additionally, the elements must be arranged as required by the claim. *Id., citing In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Applicant respectfully submits that the Rohrbaugh reference does not meet these requirements. Specifically, the Rohrbaugh reference does not disclose a stain blocking water borne coating composition comprising an organic binder, wherein the total amount of the water borne organic polymeric binders is 20-100 % by weight, based on the total weight of the water borne coating composition. Nor does the Rohrbaugh reference disclose a coating composition that prevents substances contained in the substrate from leaching into the coating composition, as required by claims 1 and 22 as amended.

While the present invention requires at least 20% by weight of a water borne organic polymeric binder, the Rohrbaugh discloses a system in which a binder is not required. In paragraphs 0011 and 0012 of Rohrbaugh it is specifically disclosed that, unlike several cited prior art systems such as the ones disclosed in US4,173,480 and US4,868,048, in the system disclosed in Rohrbaugh a “binder is not required to apply the nanoparticle to the surface.” In fact, the Rohrbaugh reference discloses mixing and/or dispersing nanoparticles in a carrier medium. (*See, e.g.*, paragraphs 0019, 0020, 0021).

The combination of a binder, inorganic nanoparticles having a layered structure and a crystal structure with positively charged layers with a binder in a water borne system is not

disclosed in the Rohrbaugh reference. While the Rohrbaugh reference in example 1 discloses a coating composition, this all the borne coating system is mixed with a synthetic hectorite clay, not a positively charged layered inorganic nanoparticle as required by claims one and 22 as amended. Further, there is no mention made of waterborne binder used in the coating composition where in the resulting coating composition is film forming and has the ability to cure at temperatures below 100° C as required by new claim 22.

In the Examiner's advisory action, the Examiner asserts that the teaching of the Rohrbach reference extends to the concept that "the polymer absorbed onto the nanoparticles (attaches to surface) not absorbs (is taken inside the particle)." However the Examiner provides no rationale for this scenario other than that the Examiner states that the polymers present are or can be organic binders were even so-called inorganic polymers (siloxanes) comprising an organic component. As these bind to some degree according to the Examiner they should be considered binders. The Examiner has provided no support for this proposition. §102 rejections are improper if they rely on inferences and interpretations that are not expressly disclosed in the reference. In response Applicants maintains that the Examiner has not provided a citation to an organic binder presence in the required amounts in a waterborne coating composition that also contains a stain blocking agent for the purposes of preventing leaching of substances from the substrate into the coating, as required by claim 1 as amended.

In fact, the Rohrbaugh reference is concerned with an entirely different problem in that is the improvement of surface properties from the coating to the external environment and not as between the coating in the substrate see for example figure 1 wherein the soil 26 to be kept away from the system is located on the coating composition 24 and no discussion of preservation of the substrate 20 is disclosed in Rohrbaugh reference at all. See paragraph 0280 of the Rohrbaugh reference.

New claim 22 also provides a curing temperature of less than 100° C, to clarify that an aim of the invention is to coat tannin containing substrates, which generally do not cure well and provide negative side effects when curing at higher temperatures. Again the Rohrbaugh reference make no such distinction and in fact example one of the Rohrbaugh reference specifically discloses coating compositions curate at elevated temperatures typically greater than 100° C.

While the Examiner has not provided an alternative nonobviousness rejection, Applicants would like to point out that the Rohrbaugh reference does not appreciate the advantages of the present invention over the prior art. The claimed invention as amended provides a waterborne film forming coating composition for application onto tannin containing substrates, such as wood, wherein the resulting coating composition presents leaching of the tannins into the coating composition. This is surprising and unexpected, as previously it was understood that waterborne coating compositions had the problems associated with them that their waterborne nature enabled some tannin to bleed out of the coated substrate and into the coating composition. By providing the combination of the stain blocking agent with inorganic nanoparticles having a layered structure and a crystal structure with positively charged layers in combination with organic polymeric binders at the required respective amounts, the present invention is able to achieve a stain blocking functionality with waterborne coating compositions, without the negative side effects associated with prior attempts to improve the stain blocking of waterborne coating compositions. See the application as filed page 1, lines 14 to 29 and page 2, lines 6-15.

Applicants respectfully submit that the §102 rejection is improper and should be withdrawn. Applicants believe that the amended claims are patentable and that the instant application should now move to allowance.

Request for Telephonic Interview

Applicant hereby requests a telephonic interview should any issues remain. The Examiner may contact Applicant's representative via email to indicate when a convenient time would be to call the Examiner, since the Examiner cannot call internationally.

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Any extension of time that may be deemed necessary to further the prosecution of this application is hereby requested.

The Commissioner is authorized to charge any additional fees which may be required, or credit any overpayment, to Deposit Account No. 50-5380, referencing the docket number shown above.

Pursuant to MPEP §502.03, authorization is hereby given to the USPTO to communicate with Applicant's representative concerning any subject matter of this application by electronic mail. I understand that a copy of these communications will be

made of record in the application file. Applicant's representative, Coraline J. Haitjema, can be reached at email address [haitjemac@hoyngmonegier.com](mailto:haitjemac@hoyngmonegier.com).

The Examiner may also contact the undersigned by telephone at the number given below in order to resolve any questions (note, this telephone number is an Amsterdam phone number, Amsterdam time is 6 hours ahead of US east coast time).

Respectfully submitted,

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